

WHAT IS CLAIMED IS:

1. A lens module, comprising:

a lens, wherein a first elastic device and a second elastic device are disposed beneath the lens; and

5 a clamping apparatus, disposed in a photoelectric sensing device for clamping the lens to the photoelectric sensing device, the clamping apparatus comprising:

a base;

a first side part and a second side part, respectively
10 disposed on two sides of the base, wherein the first side part, the second side part, and the base form a containing trough for holding the lens;

a top part, having one end connected to a top of the first side part and the other end coupled with a top of the second side part, the
15 top part comprising a first screw hole and a second screw hole; and

a first adjusting screw and a second adjusting screw, respectively screwed into the first screw hole and the second screw

hole, for pressing two sides of the lens to make the first elastic device and the second elastic device to touch the top of the base;

wherein the relative height of the two sides of the lens is adjusted by turning the first adjusting screw and the second adjusting screw.

5 2. The lens module according to claim 1, wherein the first elastic device and the second elastic device are springs.

3. The lens module according to claim 1, wherein at least one raised portion is projected from the top of the base for touching the bottom of the lens.

10 4. The lens module according to claim 1, wherein at least one raised portion is projected from the bottom of the top part for touching the top of the lens.

5. The lens module according to claim 1, wherein the top of the second side part has a fixing hole, the top part has an opening corresponding to the
15 fixing hole, and a screw goes through the opening to be screwed into the fixing hole in order to fix the top part on the top of the second side part.

6. The lens module according to claim 1, wherein a first groove and a

second groove are respectively disposed on the two sides of the lens, and a first slide and a second slide are respectively disposed on the inner sides of the first side part and the second side part for engaging with the first groove and the second groove.

5 7. The lens module according to claim 6, wherein the width of the first groove and the width of the second groove are respectively larger than the thickness of the first slide and the thickness of the second slide.

8. The lens module according to claim 1, wherein a third slide and a fourth slide are respectively disposed on the two sides of the lens, and a third
10 groove and a fourth groove are respectively disposed on the inner sides of the first side part and the second side part for engaging with the third slide and the fourth slide.

9. The lens module according to claim 8, wherein the width of the third groove and the width of the fourth groove are respectively larger than the
15 thickness of the third slide and the thickness of the fourth slide.

10. The lens module according to claim 1, wherein the first adjusting screw and the second adjusting screw are respectively vertically opposing to the first elastic device and the second elastic device.

11. A lens module, comprising:

a lens, wherein a first extending part and a second extending part are respectively disposed on two sides of the lens, and a first elastic device and a second elastic device are respectively disposed beneath the first extending
5 part and the second extending part; and

a clamping apparatus, installed in a photoelectric sensing device for clamping the lens to the photoelectric sensing device, the clamping apparatus comprising:

a base;

10 a first side part and a second side part, respectively disposed on two sides of the base, wherein the first side part, the second side part, and the base form a containing trough for holding the lens, the first side part and the second side part respectively comprising a first groove and a second groove for containing the first extending part and
15 the second extending part, and the upper surfaces of the first groove and the second groove respectively comprising a first screw hole and a second screw hole;

a top part, having one end connected to a top of the first side

part and the other end coupled with a top of the second side part; and

a first adjusting screw and a second adjusting screw,
respectively screwed into the first screw hole and the second screw
hole, for pressing the first extending part and the second extending
5 part to make the first elastic device and the second elastic device
respectively touch the lower surfaces of the first groove and the second
groove;

wherein the relative height of the two sides of the lens is adjusted by
turning the first adjusting screw and the second adjusting screw.

10 12. The lens module according to claim 11, wherein the first elastic
device and the second elastic device are springs.

13. The lens module according to claim 11, wherein at least one raised
portion is projected from the top of the base for touching the bottom of the
lens.

15 14. The lens module according to claim 11, wherein at least one raised
portion is projected from the bottom of the top part for touching the top of the
lens.

15. The lens module according to claim 11, wherein the top of the second side part has a fixing hole, and the top part has an opening corresponding to the fixing hole, and a screw goes through the opening to be screwed into the fixing hole in order to fix the top part on the top of the second side part.

16. The lens module according to claim 11, wherein the width of the first groove is larger than the total height of the first extending part and the first elastic device, and the width of the second groove is larger than the total height of the second extending part and the second elastic device.

17. The lens module according to claim 11, wherein the first adjusting screw and the second adjusting screw are respectively vertically opposing to the first elastic device and the second elastic device.

18. A scanner, including a photoelectric sensing device, wherein the photoelectric sensing device at least comprises:

a lens, wherein a first extending part and a second extending part are respectively disposed on two sides of the lens, and a first elastic device and a second elastic device are respectively disposed beneath the first extending part and the second extending part; and

a clamping apparatus for clamping the lens, the clamping apparatus comprising:

a base;

a first side part and a second side part, respectively disposed
5 on two sides of the base, wherein the first side part, the second side part, and the base form a containing trough for holding the lens, the first side part and the second side part respectively having a first groove and a second groove for engaging with the first extending part and the second extending part, the upper surfaces of the first groove and the second groove respectively having a first screw hole and a
10 second screw hole;

a top part, having one end connected to a top of the first side part and the other end coupled with a top of the second side part; and

a first adjusting screw and a second adjusting screw,
15 respectively screwed into the first screw hole and the second screw hole, for pressing the first extending part and the second extending part to make the first elastic device and the second elastic device respectively touch the lower surfaces of the first groove and the second groove;

wherein the relative height of the two sides of the lens is adjusted by turning the first adjusting screw and the second adjusting screw.

19. The lens module according to claim 18, wherein the first elastic device and the second elastic device are springs.

5 20. The lens module according to claim 18, wherein the top of the second side part has a fixing hole, the top part has an opening corresponding to the fixing hole and a screw goes through the opening to be screwed into the fixing hole in order to fix the top part on the top of the second side part.

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